

REMARKS/ARGUMENTS

After entry of this amendment, claims 1-43 will be pending and presented for examination. The claims as filed contained two claims numbered 26, so this amendment renumerates claims starting with the second claim 26 (now claim 27).

Claim Rejections 35 USC §112

In the October 6, 2003 Office Action, all claims were rejected under 35 USC §112, ¶2, as being indefinite for not specifying required structure and structural cooperative relationships among the elements. The pending claims are amended herein to explicitly state structure and structural relationships that were inherent in the claims as filed. Reconsideration of these rejections is requested.

Claim Rejections 35 USC §102

In the October 6, 2003 Office Action, all claims were rejected under 35 USC §102(e) as anticipated by U.S. Patent 6,490,306 (Stamm '306). In particular, the Office Action discusses a line-narrowing module in Fig. 3c that has a beam expander 64 with one or more optical elements and a reflection grating 60. The line-narrowing module in Fig. 3c is a spectral filter 50 that is positioned between a laser oscillator 48 and an amplifier 52 (Fig. 3a) and that filters an input beam 20 from the laser oscillator and outputs a filtered output beam 59 that goes to the amplifier.

The filter 50 of Fig. 3c of Stamm '306 is not a line-narrowing module as disclosed and claimed in the present application. Stamm's filter 50 is downstream from the oscillator 48, whereas in the present invention the line-narrowing module is part of the resonator of the laser. It is suggested that Figs. 2a, 2c, 2e, 5b, and 5d are closer in concept to the present invention than is Fig. 3c. However, regardless of whether Fig. 3c or the other figures of Stamm '306 are considered, the present invention is distinguishable for several reasons.

In independent claims 1 and 41, one claim element is a reflection grating in thermal contact with a heat sink. The application explains at page 13, line 17 to page 14, line 21, why the thermal stability provided by the heat sink is advantageous. Stamm '306 does not disclose a heat sink in thermal contact with a reflection grating. Accordingly, the rejection of independent claims 1 and 41, and dependent claims 2-14 and 42-43 under 35 USC §102 is mistaken and should be reconsidered and withdrawn.

In independent claims 15 and 41 and in dependent claim 7, one claim element is a sealed enclosure around one or more optical elements of the line-narrowing module. The October 6, 2003 Office Action makes references at page 4 to a sealed enclosure 23 of Stamm '306, implying that such enclosure discloses the claim element. Stamm '306 discusses an enclosure 23 that seals the beam path to keep it free of photoabsorbing species. 6:37-40. However, the sealed enclosure of the present invention is intended for a different function -- that of tuning the wavelength of the laser beam, which is explained at page 14, line 22 to page 16, line 17 of the present application. At page 15, lines 7-9, the present application states, "The enclosure 40 may be within a larger enclosure used to exclude photoabsorbing species and contaminants from the beam path." Claims 7, 15, and 41 as amended specify that the sealed enclosure that is used for tuning the wavelength is separate from any other enclosure (such as enclosure 23 of Stamm '306) used to exclude photoabsorbing species and contaminants from the beam path. Accordingly, claims 7, 15, and 41, and claims 8-14, 16-22, and 42-43, are patentable over the Stamm patent.

Independent claim 33 requires that the claimed beam expander comprises optics composed of a material that is thermally stable at DUV wavelengths. No such teaching is found in Stamm '306. Thus, independent claim 33 and dependent claims 34-36 distinguish over Stamm '306.

Conclusion

For all the reasons stated above, Applicants request that the Examiner reconsider the patentability of the present application. If the undersigned can be of any help, please call at 415-512-1312 x109.

Respectfully submitted,

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